

1 through 54, which are hereby incorporated by reference and made a part hereof. This publication may be obtained from the American Conference of Governmental Industrial Hygienists by writing to the Secretary-Treasurer, P.O. Box 1937, Cincinnati, Ohio 45201, or may be examined in any Metal and Nonmetal Mine Safety and Health District Office of the Mine Safety and Health Administration. Excursions above the listed thresholds shall not be of a greater magnitude than is characterized as permissible by the Conference.

(b) The 8-hour time weighted average airborne concentration of asbestos dust to which employees are exposed shall not exceed 2 fibers per milliliter greater than 5 microns in length, as determined by the membrane filter method at 400-450 magnification (4 millimeter objective) phase contrast illumination. No employees shall be exposed at any time to airborne concentrations of asbestos fibers in excess of 10 fibers longer than 5 micrometers, per milliliter of air, as determined by the membrane filter method over a minimum sampling time of 15 minutes. "Asbestos" is a generic term for a number of hydrated silicates that, when crushed or processed, separate into flexible fibers made up of fibrils. Although there are many asbestos minerals, the term "asbestos" as used herein is limited to the following minerals: chrysotile, amosite, crocidolite, anthophyllite asbestos, tremolite asbestos, and actinolite asbestos.

(c) Employees shall be withdrawn from areas where there is present an airborne contaminant given a "C" designation by the Conference and the concentration exceeds the threshold limit value listed for that contaminant.

[50 FR 4054, Jan. 29, 1985, as amended at 60 FR 35695, July 11, 1995]

#### **§ 56.5002 Exposure monitoring.**

Dust, gas, mist, and fume surveys shall be conducted as frequently as necessary to determine the adequacy of control measures.

#### **§ 56.5005 Control of exposure to airborne contaminants.**

Control of employee exposure to harmful airborne contaminants shall be, insofar as feasible, by prevention of contamination, removal by exhaust ventilation, or by dilution with uncontaminated air. However, where accepted, engineering control measures have not been developed or when necessary by the nature of work involved (for example, while establishing controls or occasional entry into hazardous atmospheres to perform maintenance or investigation), employees may work for reasonable periods of time in concentrations of airborne contaminants exceeding permissible levels if they are protected by appropriate respiratory protective equipment. Whenever respiratory protective equipment is used a program for selection, maintenance, training, fitting, supervision, cleaning, and use shall meet the following minimum requirements:

(a) Respirators approved by NIOSH under 42 CFR part 84 which are applicable and suitable for the purpose intended shall be furnished and miners shall use the protective equipment in accordance with training and instruction.

(b) A respirator program consistent with the requirements of ANSI Z88.2-1969, published by the American National Standards Institute and entitled "American National Standards Practices for Respiratory Protection ANSI Z88.2-1969," approved August 11, 1969, which is hereby incorporated by reference and made a part hereof. This publication may be obtained from the American National Standards Institute, Inc., 1430 Broadway, New York, New York 10018, or may be examined in any Metal and Nonmetal Mine Safety and Health District Office of the Mine Safety and Health Administration.

(c) When respiratory protection is used in atmospheres immediately harmful to life, the presence of at least one other person with backup equipment and rescue capability shall be required in the event of failure of the respiratory equipment.

[50 FR 4054, Jan. 29, 1985, as amended at 60 FR 30400, June 8, 1995; 60 FR 33723, June 29, 1995; 60 FR 35695, July 11, 1995]

**§ 56.5006 Restricted use of chemicals.**

The following chemical substances shall not be used or stored except by competent persons under laboratory conditions approved by a nationally recognized agency acceptable to the Secretary.

- (a) Carbon tetrachloride.
- (b) Phenol,
- (c) 4-Nitrobiphenyl,
- (d) Alpha-naphthylamine,
- (e) 4,4-Methylene Bis (2-chloroaniline),
- (f) Methyl-chloromethyl ether,
- (g) 3,3 Dichlorobenzidine,
- (h) Bis (chloromethyl) ether,
- (i) Beta-naphthylamine,
- (j) Benzidine,
- (k) 4-Aminodiphenyl,
- (l) Ethyleneimine,
- (m) Beta-propiolactone,
- (n) 2-Acetylaminofluorene,
- (o) 4-Dimethylaminobenzene, and
- (p) N-Nitrosodimethylamine.

**PHYSICAL AGENTS****§ 56.5050 Exposure limits for noise.**

(a) No employee shall be permitted an exposure to noise in excess of that specified in the table below. Noise level measurements shall be made using a sound level meter meeting specifications for type 2 meters contained in American National Standards Institute (ANSI) Standard S1.4-1971, "General Purpose Sound Level Meters," approved April 27, 1971, which is hereby incorporated by reference and made a part hereof, or by a dosimeter with similar accuracy. This publication may be obtained from the American National Standards Institute, Inc. 1430 Broadway, New York, New York 10018, or may be examined in any Metal and Nonmetal Mine Safety and Health District Office of the Mine Safety and Health Administration.

**PERMISSIBLE NOISE EXPOSURES**

Duration per day, hours of exposure	Sound level dBA, slow response
8 .....	90
6 .....	92
4 .....	95
3 .....	97
2 .....	100

**PERMISSIBLE NOISE EXPOSURES—Continued**

Duration per day, hours of exposure	Sound level dBA, slow response
1½ .....	102
1 .....	105
½ .....	110
¼ or less .....	115

No exposure shall exceed 115 dBA. Impact or impulsive noises shall not exceed 140 dB, peak sound pressure level.

NOTE: When the daily noise exposure is composed of two or more periods of noise exposure at different levels, their combined effect shall be considered rather than the individual effect on each.

If the sum

$$(C_1/T_1) + (C_2/T_2) + \dots (C_n/T_n)$$

exceeds unity, then the mixed exposure shall be considered to exceed the permissible exposure.  $C_n$  indicates the total time of exposure at a specified noise level, and  $T_n$  indicates the total time of exposure permitted at that level. Interpolation between tabulated values may be determined by the following formula:

$$\text{Log } T = 6.322 - 0.0602 \text{ SL}$$

Where T is the time in hours and SL is the sound level in dBA.

(b) When employees' exposure exceeds that listed in the above table, feasible administrative or engineering controls shall be utilized. If such controls fail to reduce exposure to within permissible levels, personal protection equipment shall be provided and used to reduce sound levels to within the levels of the table.

[50 FR 4054, Jan. 29, 1985, as amended at 60 FR 35695, July 11, 1995]

**Subpart E—Explosives**

SOURCE: 61 FR 36795, July 12, 1996, unless otherwise noted.

**§ 56.6000 Definitions.**

The following definitions apply in this subpart.

**Attended.** Presence of an individual or continuous monitoring to prevent unauthorized entry or access.